Efficacy Trials - Injection Method
Yellow Flag Iris

Submitted: Clark County Weed Management
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Focus: Efficacy Results of Injection Method used on Yellow Flag Iris
Process: Injection Method
Dates(s): 5/24/2005 - 06/07/05
Location(s): Four Test Plots within Clark

Method of Control:
Flowering stem was cut above water, between 9" and 18" above root. A cavity was created by pushing a nail down the center. Aquamaster, at full strength, was injected into the cavity. Tests were conducted using 0.3, 0.5, and 0.7 mL of herbicide per flowering stem.

Treatment Notes:
Treatments are made to the flowering stem, but not all iris plants are producing flowering stem, but not all Iris plants are producing flowers. Will herbicide transfer within a patch and controlnon-flowering leaf material?
For consistency iris infestations were all measured in square feet.

Control Results:

Herbicide Amount	Results
0.3 mL	**Control was not effective.** No control occurred at 15 square feet of infestation per treated stem, or 3 squre feet of infestation per treated stem. At 2.1 square feet of infestation per treated stem, 20% of the infestation browned.
0.5 mL	**Good control was achieved.** 100% control occurred at 0.8 and 1.125 square feet of infestation per treated stem. Tubers of flowering plants treated with 0.5 mL dug up one month post-treatment showed desiccation of rootlets and a red tint when cut open. Tubers dug up on September 23 were mushy and brown, compared to tubers dug from untreated sites with white rootlets and white tuber center.
0.7 mL	**Good control was achieved.** 100% control occurred at 1.5, 2 and 2.5 square feet of infestation per treated stem. At 6 square feet of infestation per treated stem, 50% of the infestation browned.

Non-target Effect:
None. At the Renner location, locust, snowberry, and native rose are growing within the iris patch. No visible herbicide damage.

Conclusion/Recommendations
Transfer of herbicide did occur from one iris plant with a flowering stem to an adjacent plant no in flower.
It appears that good control will occur at 0.5 mL per flowering stem. Infestations with many flowering stems - one flowering stem for every 2.5 square feet, or less, of plant material in an infestation - will receive better control.

Efficacy Trial Results On Yellow Flag Iris

Site name	50th Ave
Address	23401 NE 50th Ave, south of driveway in ditch
Plot #	Plot #1
Reference #	
Treatment Date	May 24, 2005
Treatment Method:	
Treatment Method	Cut stem + injection, 12" to 18" above root
Herbicide	Aquamaster
Injection Dosage	0.5 mL @ 100%
Area:	
Area Treated	15 sq ft
Total number of plants in area (rhizomic connection?)	22 flowering stems
Number of plants/stems actually treated	19 flowering stems
Square feet of infestation per flowering stem:	0.8
Plant Phenology:	
Plant phenology	In flower
Typical plant height	4 ft
Typical plant stem diameter	
Follow-up & Observations:	
Follow-up Date	June 14, 2005
Observations:	70% of leaf tissue in patch showing browning.
	The 3 flowering stalks left untreated east of main patch
	are all dead.
Follow-up Date	July 26, 2005
Observations:	100% of leaf tissue in main patch is dead.
	The foliage of the 3 untreated flowering stalks to the east
	shows no sign of herbicide.
Control percentage:	
Of plants/stems treated Number controlled	19
Control percentage	100%
Number Plants Controlled:	
Total # of plants controlled (rhizomic connection?)	
Notes:	

Efficacy Trial Results On Yellow Flag Iris

Site name	Renner
Address	28111 NE 122 Ave
Plot #	Plot #1
Reference #	
Treatment Date	June 3, 2005
Treatment Method:	
Treatment Method	Cut stem + injection
Herbicide	Aquamaster
Injection Dosage	0.5 mL @ 100%
Area:	
Area Treated	9 sq ft
Total number of plants in area (rhizomic connection?)	8 flowering stems
Number of plants/stems actually treated	8 flowering stems
Square feet of infestation per flowering stem:	1.125
Plant Phenology:	
Plant phenology	In flower
Typical plant height	50"
Typical plant stem diameter	5/8" at cut
Follow-up & Observations:	
Follow-up Date	June 14, 2005
Observations:	All iris in patch showing signs of herbicide.
	Locust, snowberry, and native rose growing among iris
	not showing herbicide damage.
Follow-up Date	
Observations:	
Control percentage:	
Of plants/stems treated Number controlled	8
Control percentage	100%
Number Plants Controlled:	
Total # of plants controlled (rhizomic connection?)	
Notes:	
All iris material within patch brown and dead.	

Efficacy Trial Results of Yellow Flag Iris

Site name	**Woodin Creek**		
Address	Rasmussen, Battle Ground		
Plot	**Plot #1**	**Plot #2**	**Plot #3**
Reference #			
Treatment Date	June 3, 2005	June 3, 2005	June 3, 2005
Treatment Method:			
Treatment Method	Cut stem + injection, 10" above root	Cut 12" above root	Cut 13" above root
Herbicide	Aquamaster	Aquamaster	Aquamaster
Injection Dosage	0.3 mL @ 100%	0.3 mL @ 100%	0.3 mL @ 100%
Area:			
Area Treated	30 sq ft	9 sq ft	15 sq ft
Total number of plants in area (rhizomic connection?)	3 flowering stems	3 flowering stems	7 flowering stems
Number of plants/stems actually treated	2 flowering stems	3 flowering stems	7 flowering stems
Square feet of infestation per treated stem:	15	3	2.1
Plant Phenology:		**Plant Phenology:**	
Plant phenology	In flower	In flower	In flower
Typical plant height	53"	47"	46"
Typical plant stem diameter	5/8"	5/8"	5/8"
Follow-up:			
Date	June 13, 2005	June 13, 2005	June 13, 2005
Observations	**Very little effect** 7 Leaves show browing edges	**Very little effect.** 3 leaves show brown	**Yellowing on only** 12 leaves
Date	July 26, 2005	July 26, 2005	July 26, 2005
Observations	**Slight damage** No dead	**No dead.**	**20% of clump dead** Remaining no effect
Control percentage:			
Of plants/stems treated, # controlled	0	0	2
Control percentage	0%	0%	29%
Number Plants Contrlled:			
Total # of plants controlled (rhizomic connection?)			
Notes:			
0.3 mL dose Not effective.			

Efficacy Trial Results of Yellow Flag Iris

Site name	**72nd & 78th**			
Address	NW corner of NE 72nd Ave & NE 78th St			
Plot	**Plot #1**	**Plot #2**	**Plot #3**	**Plot #4**
Reference #				
Treatment Date	June 7, 2005	June 7, 2005	June 7, 2005	June 7, 2005
Treatment Method				
Treatment Method	Cut-stem + injection, 10" above root	Cut 9" above root	Cut 9" above root	
Herbicide	Aquamaster	Aquamaster	Aquamaster	Aquamaster
Injection Dosage	0.7 mL @ 100%	0.7 mL @ 100%	0.7 mL @ 100%	0.7 mL @ 100%
Area:				
Area Treated	9 sq ft	6 sq ft	9 sq ft	6 sq ft
Total number of plants in area (rhizomic connection?)	6 flowering stems	1 flowering stem	9 flowering stems	3 flowering stems
Number of plants/stems actually treated	6 flowering stems	1 flowering stem	4 flowering stems	3 flowering stems
Square feet of infestation per treated stem:	1.5	6	2.25	2
Plant phenology:				
Plant phenology	In flower	In flower	In flower	In flower
Typical plant height	35"	33"	34"	32"
Typical plant stem diameter	1/2" to 5/8"		5/8"	5/8"
Follow-up Date(s):				
Follow-up Date	June 14, 2005	June 14, 2005	June 14, 2005	June 14, 2005
Observations:	All flowers wilted 80% of plant material browning		60% of plant material turning brown 1 of the untreated flowering stems shows no effect.	All plant material yellow to brown
	July 26, 2005	July 26, 2005	July 26, 2005	July 26, 2005
Control percentage:				
Of plants/stems treated, # controlled	6	1	4	3
Control percentage	100%	100%	100%	100%
Total Plants Controlled:				
Total # of plants controlled (rhizomic connection?)			9	
Notes:				
	Nearby clump of iris plants not affected 100% of injected clump is dead.	50% of clump dead. Remaining 50% show yellowing on top 12".	80% of clump dead. Remaining 20% show yellowing on top 14". 5 flowering stems not injected are also dead.	100% of clump dead. No green at all.